PROJECT DESCRIPTION

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PROJECT INVOLES GEOMETRIC IMPROVEMENTS TO MD 32, NORTH AND SOUTH OF THE INTERSECTION WITH MD 99 AND OLD FREDERICK ROAD. MD 32 WILL BE WIDENED TO THE WEST, TO PROVIDE LEFT AND RIGHT TURN LANES. AS A RESULT OF THE WIDENING THE SIGNAL AT MD 32 AND MD 99 INTERSECTION WILL BE UPGRADED WITH THE REMOVAL OF THE EXISTING SIGNAL POLES IN THE NORTHWEST AND SOUTHWEST QUADRANTS, AND THE INSTALLATION OF NEW SIGNAL POLES AND MAST ARMS IN THE SAME QUADRANTS. THE PROPOSED MD 32 SIGNAL HEADS SHALL BE WIRED WITH 7-CONDUCTOR CABLE TO PROVIDE THE INFRASTRUCTURE FOR FUTURE EXPANSION TO E/P PHASING WHEN DEEMED NECESSARY. THE EXISTING MD 32 SIGNAL HEADS ON THE MAST ARM IN THE NORTHEAST QUADRANT SHALL ALSO BE REWIRED WITH 7-CONDUCTOR CABLE FOR FUTURE EXPANSIONG.

INTERSECTION OPERATION

INTERSECTION OPERATION SHALL REMAIN THE SAME AS EXISTING CONDITIONS.

CONTROLLER REQUIREMENTS

ALL PROPOSED SIGNAL HEAD WIRING SHALL BE BROUGHT BACK TO THE EXISTING CONTROLLER CABINET.

REVISION 1 NOTES

THE CONSTRUCTION OF THE 24 IN. RCCP DRAINAGE STRUCTURE SHALL BE COMPLETED IN PHASE 1, PRIOR TO THE INSTALLATION AND COMPLETION OF THE PROPOSED SIGNAL EQUIPMENT.

THEREFORE, THE EXISTING CONDUIT FROM THE EQUIPMENT CABINET IN THE NORTHEAST QUADRANT TO THE SIGNAL EQUIPMENT IN THE NORTHWEST QUADRANT IS IMPACTED BY THE PROPOSED CONSTRUCTION OPERATION.

THE CONTRACTOR SHALL INSTALL AN OVERHEAD MESSENGER CABLE BETWEEN THE TWO EXISTING SIGNAL POLES (IN NORTHEAST AND NORTHWEST QUADRANTS), AND TEMPORARILY REWIRE EXISTING SIGNAL EQUIPMENT ON WEST SIDE OF MD 32.

THE TEMPORARY REWIRING OF EXISTING SIGNAL HEADS SHALL BE COMPLETED DURING A NIGHT-TIME CONSTRUCTION AND TRAFFIC CONTROL OPERATION, TO MINIMIZE THE IMPACT TO TRAFFIC (SEE TEMPORARY WIRING DIAGRAM - THIS SHEET).

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EQUIPMENT LIST "B"

B. Equipment to be Furnished and/or Installed by the Contractor.

Item No.	Specification Number		Quantity	Description
5014	585424		160 LF	24 Inch White Lead Free Reflective Thermoplastic Pavement Markings
8001	800000		3 EA	F & I Micro-Loop Probe Set
8002	800000		1 EA	Remove and Dispose of Existing Material
8003	800000		730 LF	2 Inch Diameter Polyvinyl Electrical Conduit, Schedule 80, Trenched
8005	801004		10 CY	Concrete for Signal Foundation
8008	801605		27 SF	Sheet Aluminum Signs-Mast Arm Mounted
8012	802501		890 XXX LF	No. 6 AWG Stranded Bare Copper Ground Wire
8013	805011	1	40 LF	1 In. Electrical Conduit-Galvanized Sleeve
8014	805135	1	610 XX LF	3 Inch, Schedule 80 Rigid PVC Conduit, Trenched
8015	805155		255 XXX LF	4 Inch Schedule 80 Rigid PVC Conduit - Slotted
8016	806002		1 EA	250 Watt H.P.S. Lamp & Luminaire Rectangular
8017	811001		8 X EA	F & I Electrical Handhole
8018	811002		6 X EA	Remove Electrical Handhole
8020	818036		1 EA	Steel Pole with a Single 50' Mast Arm
8021	818041		⚠ 1 EA	Steel Pole with a Single 60' Mast Arm
8023	837001		2 EA	Ground Rod - ¾" Diameter x 10 Foot Length
8026	860272		36 EA	12 Inch Vehicular Traffic Signal Head Section
8027	860292		2 EA	Cut, Clean, Galvanize and Cap Traffic Signal Structure
8028	861104		460 LF	Electrical Cable - 2 Conductor (Aluminum Shielded)
8029	861107		1750 XXX LF	Electrical Cable - 5 Conductor (No. 14 AWG)
8030	861108	1	1280 LF	Electrical Cable - 7 Conductor (No. 14 AWG)
8031	861116		670 XXX LF	Electrical Cable - 2 Conductor (No. 12 AWG)
8032	862101		1400 LF	Loop Wire Encased in Flexible Tubing (No. 14 AWG)
8033	862102		500 LF	Saw Cut for Signal (Loop Detector)
8034	866104		1 EA	20 Ft. Lighting Arm on Signal Structure
8036	805050		2 EA	Weather Head, 3 Inch
8037	869101	1	100 LF	Steel Span Wire - ¼ Inch Diameter
8038	N/A		1300 LF	Remove and Install Existing Interconnect Cable
8039	802145		4 EA	Adjust Existing Handhole

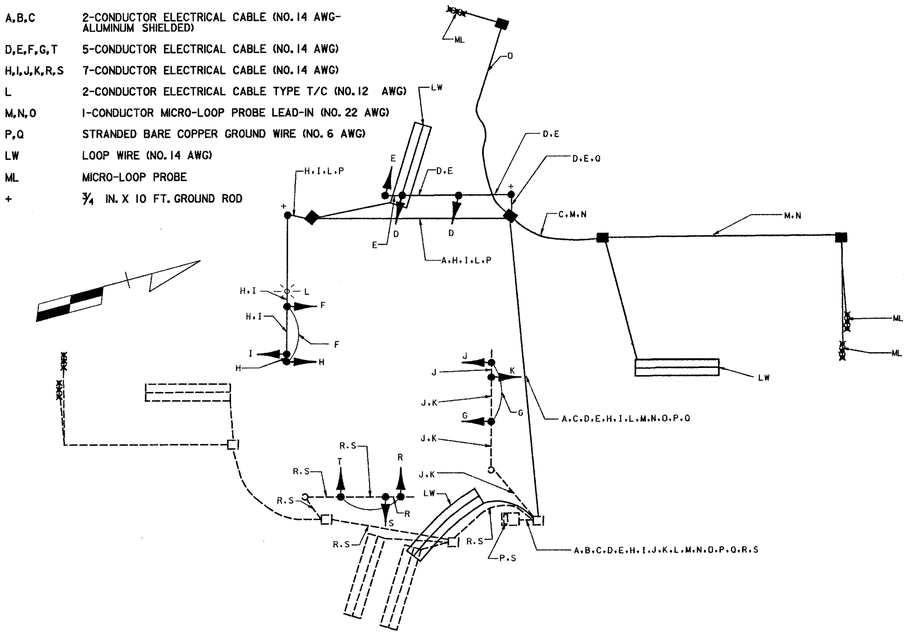
1 CONSTRUCTION DETAILS

P. INSTALL 3" WEATHER HEAD TO EXISTING SIGNAL POLE, AS DIRECTED BY THE ENGINEER.
Q. INSTALL OVERHEAD ¼ INCH SPAN WIRE BETWEEN EXISTING SIGNAL POLES FOR TEMPORARY SIGNAL CABLES.
R. REMOVE EXISTING WIRING FOR ALL SIGNAL HEADS AND LUMINAIRE. INSTALL NEW TEMPORARY WIRING FOR ALL SIGNAL HEADS AND LUMINAIRE FROM SIGNAL CONTROL CABINET TO EXISTING SIGNAL POLE IN NORTHEAST QUADRANT. OVERHEAD TO EXISTING SIGNAL POLE IN NORTHWEST QUADRANT (SEE TEMPORARY WIRING DIAGRAM - THIS SHEET). ALL TEMPORARY SIGNAL CONTROL CABLES SHALL BE INSTALLED INTERNAL TO THE EXISTING SIGNAL POLES. NO EXTERNAL CONDUITS/RISERS SHALL BE ALLOWED.

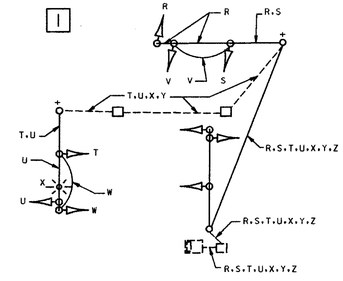
ULTIMATE WIRING DIAGRAM

WIRING KEY

A,B,C	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG-ALUMINUM SHIELDED)
D,E,F,G,T	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
H,I,J,K,R,S	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
L	2-CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 12 AWG)
M,N,O	1-CONDUCTOR MICRO-LOOP PROBE LEAD-IN (NO. 22 AWG)
P,Q	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
LW	LOOP WIRE (NO. 14 AWG)
ML	MICRO-LOOP PROBE
+	¾ IN. X 10 FT. GROUND ROD



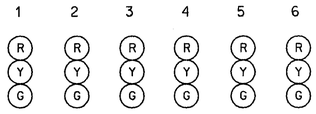
TEMPORARY WIRING DIAGRAM



WIRING KEY

R,S,T,U,V,W	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
X	2-CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 12 AWG)
Y,Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)

PHASE CHART



PHASE 2 & 6	G	G	G	R	R	R	
2 & 6 CHANGE	Y	Y	Y	R	R	R	
PHASE 4 & 8	R	R	R	G	G	G	
4 & 8 CHANGE	R	R	R	Y	Y	Y	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	

DWG. NO. SIG-2

1 REVISION NO. 1 MAY 17, 2002
⚠ ADDENDUM NO. 1

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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
TRAFFIC SIGNALIZATION GENERAL INFORMATION PLAN
MD 32 AT MD 99
SOUTHBOUND LANE WIDENING

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